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10/536,471	05/26/2005	James A. Proctor Jr.	080589	5170

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EXAMINER
DOAN, PHUOC HUU

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
05/30/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 1-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Trainnin (US Pub No: 2003/0235170) in view of Cook (US Patent No: 6,005,884).

As to claim 1, Trainin discloses a method for operating a repeater in a wireless

network "performed operating as an full duplex by cellular phone system"

including at least one access point (page 1, par [0013] "the second function

performed by an access point and can be considered as the function of a radio

repeater"), the method comprising: detecting the presence of at least one access

point based on information transmitted on one of at least two frequency channels

using a wireless transmission protocol associated with the at least one access point

(page 2, par [0017-0018] "access point performed the specific point control

function of a wireless communication protocol such as the IEE 802.11 standard

and using the number of frequency channels, for example: the beacon signal to

scan on the number of frequency channels"); identifying the detected at least one

access point based upon the detected information (page 2, par [0021] "is

addressable by MAC address of any station associated by access point"); and

selecting the identified at least one access point and the at least two frequency

channels for repeater operation (page 2, par [0019] "access point performed by the

basic service set identifier BSSID and the function of access point act the same

function of a repeater"); wherein the repeater is configured to retransmit first

information received from the selected at least one access point on one of the at

least two frequency channels to a node in the wireless network wherein the

repeater is configured to retransmit second information from the node to the

selected at least one access point on another of the at least two frequency channels

(page 3, par [0032] "the first communication device is assigned and configured to

function as an access point repeater to more mobile units"), and wherein the

repeater is configured to retransmit a beginning portion of the first information and

the second information prior to receiving an end portion of the first information

and the second information (page 3, par [0029-0032] "first frequency is

communicated between access point to repeater, and second frequency is

communicated from repeater to another mobile and the other way to

transmitted/received of the information. And further also supported in Fig. 1,

which indicated an AP 130B that has a function act like a repeater and

communicated with mobile device 140C"). However, Trainin does not disclose for operating a repeater.

In the same field of endeavor, Cook disclose for operating a repeater (col. 9, lines 3-47 "described for operating a repeater by a bi-directional communication path supplied by the communication link"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a repeater as taught by Cook to the system of Trainin in order to extend the coverage area of communication between devices.

As to claim 2, Trainin further discloses a method according to claim 1, wherein the detecting is initiated automatically during a power-on sequence associated with the repeater (page 2, par [0020] "to perform its corresponding media access function based on the power on").

As to claim 3, Cook further discloses a method according to claim 1, wherein the detecting is initiated by activating an input device associated with the repeater (Fig. 2, item 14 host computer associated with input device and coupled to repeater, col. 16, lines 9-22).

As to claim 4, Cook further discloses a method according to claim 3, wherein the

input device includes a button (Fig. 2, item 14 host computer associated with input

device includes a keyboard or button and coupled to repeater, col. 16, lines 9-22).

As to claim 5, Trainin further discloses a method according to claim 1, wherein the

wireless network includes a time division duplex wireless local area network

(WLAN) compliant with at least one of an IEEE 802.11 specification, and an IEEE

802.16 specification (page 2 par [0020]).

As to claim 6, Cook further discloses a method according to claim 1, wherein the

detecting includes: scanning the at least two frequency channels for a beacon

signal thereon associated with the at least one of the at least two frequency

channels (col. 8, lines 60-65); and choosing the at least one access point as a

preferred access point based on a quality of a metric associated with the beacon

signal (col. 12, lines20-37 "at least seventy five hoping frequencies used a beacon

signal based on FHSS, DSSS; each hopping frequency must be used equally on the

average by each transmitter).

As to claim 7, 18, Trainin further discloses a method according to claim 6, wherein

the metric includes one or more of: a power level associated with the beacon

signal, a media access control (MAC) address contained in the beacon signal, a

basic service set identifier (BSS_ID) contained in the beacon signal, and a signal to

noise ratio associated with the beacon signal (page 2, par [0020-0021]).

As to claim 8, Cook further discloses a method according to claim 1, further

comprising scanning the at least two frequency channels at a periodic interval to

determine if the selected at least one access point has changed to another of the at

least two frequency channels (col. 11, lines 15-25 "the FHSS technique "hops"

from carrier frequency to carrier frequency at a specified interval").

As to claim 9, Trainin further discloses a method according to claim 1, wherein the

detecting includes: scanning the at least two frequency channels (page 2, par

[0020]); and storing the information associated with each of the at least two

frequency channels in a memory associated with the repeater (Fig. 3, page 2, par

[0020-0021] "buffers 335, 340, and 350").

As to claim 10, Trainin further discloses a method according to claim 9, wherein

the detecting further includes: re-scanning the at least two frequency channels

(page 2, par [0020]); and using the stored information associated with each of the

at least two frequency channels to re-select another of the at least one access point

(page 2, par [0020-0021]).

As to claim 11, Cook further discloses a method according to claim 10, wherein

the re-scanning is performed upon power-up of the repeater (col. 20, lines 1-10

"RF power level of the RF signals distributed by the repeater in associated DC

blocking capacitor 86 filters signals").

As to claim 12, Cook further discloses a method according to claim 1, wherein the

information associated with the at least two frequency channels is used to eliminate

another of the at least two frequency channels as being available (col. 11, lines 15-

25, col. 12, lines 25-35).

As to claim 13, Trainin further discloses a method according to claim 1, wherein

the information includes system level information transmitted from the at least one

access point (page 2, par [0018]).

As to claim 14, Trainin further discloses a method according to claim 13, wherein the system level information includes a MAC address associated with the at least one access point (page 2, par [0018]).

As to claim 15, Trainin further discloses a method according to claim 13, wherein the system level information includes a BSS_ID associated with the at least one access point (page 3, par [0030]).

As to claim 16, Trainin further discloses a method according to claim 13, further comprising transmitting the system level information on a maintenance link associated with the at least one access point (page 3, par [0024]).

As to claim 17, Cook further discloses a method according to claim 9, wherein the storing includes: storing the information in a non-volatile memory (col. 9, lines 28-40); moving the repeater to a new location and re-powering the repeater (col. 10, lines 20-50); and using the stored information when the repeater is re-powered in the new location (col. 20, lines 1-10 "RF power level of the RF signals distributed by the repeater in associated DC blocking capacitor 86 filters signals") to acquire the one of the at least two frequency channels by scanning the at least two

frequency channels and comparing information obtained during the scanning with the information stored in the non-volatile memory (col. 13, lines 20-53).

As to claim 18, Trainin further discloses a method according to claim 1, wherein the detecting includes: scanning the at least two frequency channels to detect one of: a MAC address, and a BSS_ID associated with the at least one access point (page 2, par [0019-0020]).

As to claim 19, Trainin further discloses a method according to claim 1, further comprising notifying one or more clients on a repeated channel that the one of the at least two frequency channels associated with the at least one access point has changed (page 2, par [0021]).

As to claim 20, Trainin further discloses a method according to claim 1, further comprising: establishing a maintenance link between an integrated station device associated with the repeater and the at least one access point (page 2, par [0020]; and receiving a remote management message including the information in the integrated station device over the established maintenance link (page 2, par [0016-0017]).

As to claim 21, Trainin further discloses a method according to claim 20, further comprising: storing the information in a memory (page 2, par [0020]); and generating a scan table in the memory based on the stored information (page 2, par [0020-0021]).

As to claim 22, Trainin further discloses a method according to claim 20, further comprising: storing the information obtained using the maintenance link in the at least one access point, and monitoring the information using one of: a SNMP, and a network management protocol (page 3, par [0024] "a SNMP is a network management tools; COTS commercial of the shelf that has been on the market or vendors").

As to claim 23, claim specifies an apparatus necessary to perform the method steps as specified in claim 1 and is therefore rejected for the same reasons.

As to claim 24, claim is rejected for the same reasons as set forth in claim 2.

As to claim 25, claim is rejected for the same reasons as set forth in claim 3.

As to claim 26, claim is rejected for the same reasons as set forth in claim 4.

As to claim 27, claim is rejected for the same reasons as set forth in claim 5.

As to claim 28, claim is rejected for the same reasons as set forth in claim 6.

As to claim 29, claim is rejected for the same reasons as set forth in claim 2.

As to claim 30, Cook further discloses a repeater according to claim 23, wherein the instructions further cause the processor to scan the at least two frequency channels to determine if the selected at least one access point has changed to another of the at least two frequency channels if a transmission from the preferred access point has not been received by a predetermined time (col. 11, lines 15-25 "the FHSS technique "hops" from carrier frequency to carrier frequency at a specified time interval").

As to claim 31, claim is rejected for the same reasons as set forth in claim 9.

As to claim 32, claim is rejected for the same reasons as set forth in claim 10.

As to claim 33, claim is rejected for the same reasons as set forth in claim 11.

As to claim 34, claim is rejected for the same reasons as set forth in claim 12.

As to claim 35, claim is rejected for the same reasons as set forth in claim 13.

As to claim 36, claim is rejected for the same reasons as set forth in claim 14.

As to claim 37, claim is rejected for the same reasons as set forth in claim 15.

As to claim 38, claim is rejected for the same reasons as set forth in claim 16.

As to claim 39, claim is rejected for the same reasons as set forth in claim 17.

As to claim 40, claim is rejected for the same reasons as set forth in claim 18.

As to claim 41, claim is rejected for the same reasons as set forth in claim 19.

As to claim 42, claim is rejected for the same reasons as set forth in claim 20.

As to claim 43, claim is rejected for the same reasons as set forth in claim 21.

As to claim 44, claim is rejected for the same reasons as set forth in claim 1.

As to claim 45, claim is rejected for the same reasons as set forth in claim 17.

As to claim 46, Cook further discloses a method according to claim 1, further comprising: integrating at least a partial station device capability into the repeater for receiving beacon signals from the at least one access point (col. 8, lines 14-26, and lines 60-65); and transmitting the beacon signals on another of the al least two frequency channels associated with the repeater (col. 11, lines 16-35).

As to claim 47, Cook further discloses a method according to claim 46, further comprising: modifying the information received in the beacon signals to provide new frequency channel information to form a modified beacon signal (col. 14, lines 30-45); and transmitting the modified beacon signal on the another of the at

least two frequency channels (col. 14, lines 20-41).

As to claim 48, Cook further discloses a method according to claim 46, further

comprising: modifying the information received in the beacon signals by deleting

at least a portion of a DS_parameters message compliant with an 802.11 standard

protocol associated with the beacon signal to form a modified beacon signal (col.

11, lines 15-30); and transmitting the modified beacon signal on the another of the

at least two frequency channels (col. 14, lines 20-41).

As to claim 49, the combination of Trainin, and Cook further disclose a repeater

according to claim 23, further comprising an integrated station device coupled to

the radio frequency section, the memory, and the processor (Fig. 1, item 28, col. 9,

lines 49-65 of Cook), and wherein the instructions further cause the processor to:

receive a beacon signal from the at least one access point (page 2 par [0018] of

Trainin); and modify at least a portion of the beacon signal associated with an

assigned frequency channel to indicate a modified assigned frequency channel , the

modified assigned frequency channel including the one of the at least two

frequency channels to form a modified beacon signal (col. 14, lines 20-41 of

Cook); and transmit the modified beacon signal on the another of the at least two

frequency channels (col. 14, lines 20-41 of Cook).

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Sheng (US Pub No: 2002/0101843) discloses "Signal propagation

method for wireless network"

4.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to PHUOC H. DOAN whose telephone number is

571-272-7920. The examiner can normally be reached on 9:30 AM - 6:30 PM.

        If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, VINCENT HARPER can be reached on 571-272-7605.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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05/24/08